

## REMARKS

Claims 1-13, 17-28, 33-44, 47-83, and 87-99 are pending, with the independent claims being 1, 17, 33, 47-48, 54-57, 59-62, 67, 73, 74, 87-88, 94-95, and 97-99. Claims 1, 17, 33, 47, 48, 54-55-57, 59, 60, 61, 74, 87, 88, 94, and 99 have been amended in the preambles to address the Examiner's rejections under § 112 that the preambles were insufficiently connected to the bodies of these claims. These amendments do not narrow the scope of the amended claims.

Claims 1-3, 13, 17-19, 27, 33-35, 43, 47-50, 54-57, 59-61, 74-76, 87-90, 94-95, and 98-99 have been amended to clarify that the "fund" recited is a "secondary market traded fund."

Claims 87, 88, 94, 95, 97, and 98 were amended to recite that a computer means is used to determine the fund sensitivity coefficients (87) or to create the proxy portfolio (88, 94, 95, 97, and 98). These amendments should address the rejection under 35 U.S.C. § 101 by tying the processes to a computer apparatus. Additionally, claims 88, 94, 95, 97, and 98 are statutory subject matter because they transform underlying subject matter (a universe of securities) into a different state or thing (a proxy portfolio).

The first paragraph on page 36 was replaced to correct a typographical error.

Filed herewith is a copy of the Declaration of Charles A. Baker, dated March 18, 2005. This Declaration was originally filed in the application number 09/536,258 ("the '258 application"). The present application is a Continuation-in-part of the '258 application. The statements in Mr. Baker's Declaration apply with equal force to the present application.

### **Description of the Claimed Invention**

The claimed invention generally relates to systems and methods to allow calculation of an intra-day net asset value (NAV) of shares of an actively managed exchange-traded fund

(AMETF) without knowledge of the specific assets underlying the AMETF. In some aspects, the invention allows such valuation by using factor analysis to develop a hedging portfolio with substantially the same sensitivities to a set of factors as the AMETF itself. The securities underlying the *hedging* or *proxy* portfolio (but not those of the AMETF itself) can be disclosed to entities that invest in the AMETF in order to allow those entities to estimate the value of the AMETF, but the securities underlying the AMETF itself can be kept secret. Such secrecy is an established practice for managers of actively managed funds in order to prevent “front running” and “free riding” by other investors.

The present invention is new and non-obvious. *See* Declaration of Charles A. Baker at ¶ 17. The importance of systems and methods that allow trading of AMETFs has been recognized in several financial publications. *See* Declaration of Charles A. Baker at ¶¶ 15-16. First, the SEC itself has recognized the need in the art for systems and methods to allow trading of AMETFs, and that such systems and methods did not yet exist:

“Recently, the concept of an ‘actively managed ETF’ has attracted significant attention, even though many of the details regarding the potential operations of actively managed ETFs are apparently still in development.”

- SEC Concept Release, November 2001 (filed herewith as **Exhibit A**)

Likewise, TheStreet.com and the Wall Street Journal (U.S.) have recognized the long felt industry need for trading of AMETFs:

“[W]hat about actively managed funds? Will they ever come in the exchange-traded variety?” The consensus at an industry conference . . . is that they will.”

- TheStreet.com, May 16, 2000 (filed herewith as **Exhibit B**)

“There remains a great deal of opportunity for new innovations and product extensions into fixed income, leveraged and enhanced ETFs, with eventually even an actively managed version.”

- TheStreet.com, May 16, 2001 (filed herewith as **Exhibit C**)

“About a half-dozen mutual-fund companies are interested in launching actively managed exchange-traded funds.”

- The Wall Street Journal, May 16, 2000 (filed herewith as **Exhibit D**)

The Wall Street Journal, The Wall Street Journal Europe, and Sovereignwealth.com have recognized the difficulties of implementing a solution that would allow the trading of AMETFs:

“The main hurdle to constructing actively managed ETFs has to do with overcoming issues of transparency. With index-tracking ETFs, investors know exactly what’s inside and, therefore, how shares should be valued. But if active managers bare their holdings, they risk giving other investors a chance to mirror their strategies while ETF investors pay the fees.”

- The Wall Street Journal, January 11, 2005 (filed herewith as **Exhibit E**)

“[Actively managed exchange-traded funds], the most ambitious of the new products, faces huge hurdles that could take years to clear. But that hasn’t stopped fund companies from pouring money into development.”

- The Wall Street Journal Europe, September 26, 2000 (filed herewith as **Exhibit F**)

“[A]t least six firms are slated to offer actively managed ETFs in the next year, although portfolio transparency issues must be resolved beforehand.”

- Sovereignwealth.com, 2001 (filed herewith as **Exhibit G**)

The “transparency issues” referred to in the Sovereignwealth.com article relate to the fact that the specific holdings of an AMETF must not be disclosed (to prevent front running and free riding), but certain information is required in order to allow hedging and valuation of the AMETF. *See*

Declaration of Charles A. Baker at ¶¶ 10-13. *The hedging and valuation problems were solved by the present invention.*

The importance of the present invention by the American Stock Exchange was recognized in a publication by the Financial Research Corporation:

“Actively managed ETFs have yet to be filed with the SEC because nobody has yet been able to figure out how to create one.... It seems that only a few rocket scientists at the American Stock Exchange...have the ability to envision the mechanics of putting together an actively managed ETF.”

- Financial Research Corp., May 31, 2000 (filed herewith as **Exhibit H**)

Similarly, the Wall Street Journal has recently recognized AMEX’s solution to the problems blocking AMETFs:

“The American Stock Exchange says it has developed a way to overcome [transparency] issues: don’t reveal the underlying holdings of the actively managed ETF, but instead construct a tracking portfolio with the same risk characteristics.”

- The Wall Street Journal, January 11, 2005 (filed herewith as **Exhibit E**)

These publications establish the long felt need in the art for systems and methods to allow trading of AMETFs, the difficulties in developing such systems and methods, and the great achievement that the American Stock Exchange has realized by developing such systems and methods, as reflected in the presently claimed invention. These publications demonstrate the non-obviousness of the presently claimed invention. *See Graham v. John Deere*, 383 U.S. 1, 17-18 (1966).

**Rejections Under 35 U.S.C. § 112**

Claims 1, 17, 47, 48, 54, 55, 60, 61, 74, 87, 88, 94, and 99 were rejected under 35 U.S.C. § 112, ¶ 2 for alleged indefiniteness. Applicants have amended these claims to better link the preamble to the bodies of the claims, as suggested by the Examiner.

Claims 1, 17, 33, 55, 56, 57, 59, 60, 61, 74, 90, 94, 95, 97, 98, and 99 were rejected under 35 U.S.C. § 112, ¶ 2 because the Examiner alleged that “substantially the same” is not clear. Applicants respectfully request reconsideration of this rejection. Claim definiteness turns on “whether those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986). The present application provides several Examples (see pages 41-46) and Figures 7-9, which show the accuracy of several proxy portfolios used to model test funds. In each case, those skilled in the art would understand that the returns of those proxy portfolios was “substantially the same” as the returns of the test funds. Those skilled in the art would thus understand what “substantially the same” means when the rejected claims are read in light of the specification, especially the Examples and Figures 7-9. Applicants therefore request that this rejection be withdrawn.

**Rejections Under 35 U.S.C. § 101**

Claims 87, 88, 94, 95, 97, and 98 were rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter. The amendments to these claims recite that a computer means is used to determine the fund sensitivity coefficients (87) or to create the proxy portfolio (88, 94, 95, 97, and 98). These amendments should address the rejection under 35 U.S.C. § 101 by tying the processes to a computer apparatus. Additionally, claims 88, 94, 95, 97, and 98 are

statutory subject matter because they transform underlying subject matter (a universe of securities) into a different state or thing (a proxy portfolio). Applicants request reconsideration of this rejection in view of the amendments and the fact that claims 88, 94, 95, 97, and 98 are directed to the transformation of underlying subject matter into a different state or thing, and request that this rejection be withdrawn.

### **Rejections Under 35 U.S.C. § 102**

Claims 1-3 and 10 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Dembo (U.S. Patent No. 5,799,287). Dembo does not teach or suggest composing a proxy portfolio that does not reveal assets of a traded fund or for keeping these assets secret. The teachings of Dembo are thus unrelated to the present invention. The “replicating portfolio” described by Dembo is not the same as the proxy and hedging portfolios in the presently claimed invention. As Dembo describes at col. 2, lines 25-32:

“a portfolio manager may attempt to construct a portfolio whose value tracks a given market index. For example, a portfolio may be constructed from a set of bonds whose values are intended to offset a set of future liabilities or to hedge against losses in a given portfolio. This technique is referred to a “portfolio replication.”

The Dembo patent relates to an improvement to replicating portfolios that accounts for turbulent market conditions. See Dembo at col. 2, lines 38-43. While the replicating portfolio is designed to behave like the target portfolio, Dembo does not disclose or suggest using a replicating portfolio to provide information to the market to allow trading of the target portfolio. This is an important contrast with the invention of claims 1-3 and 10, all of which involve creating a proxy portfolio to model a traded fund without revealing the traded fund assets. Importantly, the modeled portfolio in Dembo is not a traded fund.

Dembo does not suggest that the methods disclosed in that patent should be used to create a proxy portfolio for a traded fund, nor that the proxy portfolio should not reveal the holdings of a traded fund. In the present invention, it is critical that the proxy portfolio track the traded fund as closely as possible, particularly when it is used as in claim 2 to estimate the value of the traded fund throughout a trading period. Instead, Dembo only teaches the use of a replicating portfolio that allows a portfolio manager to hedge risks, and not to use the replicating portfolio to track the value of a traded fund. Dembo notes that “downside regret may be more useful to a portfolio manager since positive deviations from a target portfolio are generally considered desirable.” Dembo at col. 9, lines 56-59. This contrasts with the present invention, where the proxy portfolio has substantially the same exposure to a set of risk factors as the traded fund, and thus would have no significant deviations from the traded fund. In the present invention, “positive deviations” in the proxy portfolio from the traded fund are not “generally considered desirable,” as they are in Dembo. Dembo does not anticipate claim 1, and thus the rejection of claims 1-3 and 10 under § 102 should be withdrawn.

Furthermore, regarding claim 2, Dembo does not teach “calculating an estimated value for the traded fund based on the value of the proxy portfolio.” The Examiner alleges that this limitation is taught in Dembo’s claim 3. Applicants respectfully disagree. Dembo’s claim 3 requires computing a price for the replicating portfolio, but it does not suggest that the price of the target portfolio should be based on the price of the replicating portfolio. Nor does Dembo suggest “publishing the estimated value periodically throughout the trading period.” The Examiner alleges that this limitation is taught in Dembo’s claims 6(d), 7, and 10. Applicants respectfully disagree. Dembo’s claim 6(d) merely provides “information relating to the optimal

replicating portfolio,” but does not state that information is an estimated value based on the price of the replicating portfolio. Dembo’s claim 7 computes a current price based on market price, but does not teach associating the replicating portfolio price with the value of the target portfolio. Dembo’s claim 10 specifies that the current price is based on a real-time data feed, but does not associate the replicating portfolio price with the value of the target portfolio.

### **Rejections Under 35 U.S.C. § 103**

Applicants have submitted several references and a declaration that show that the invention would not have been obvious under the factors set forth in *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966), including (1) long felt need in the art for systems and methods for trading AMETFs, (2) the difficulties in developing such systems and methods, and (3) industry accolades to the Applicants who solved these problems. The Examiner should consider this evidence in reconsidering these rejections.

#### *Rejection of claim 1 over Connor in view of Jameson (U.S. Pat. Appl. Pub. No. 2004/0059621)*

Claim 1 was rejected over Connor in view of Jameson. The Examiner cited Jameson for allegedly teaching the limitation “the proxy portfolio does not reveal the fund assets” and “trading of shares of a fund without revealing the fund assets.” Jameson neither teaches nor suggests either limitation in the paragraphs cited by the Examiner (¶¶ 62, 147-156) nor anywhere else. The cited paragraphs in Jameson relate to portfolio replication, but do not relate to a proxy portfolio that does not reveal fund assets, nor do they relate to trading shares of a fund without revealing the fund assets. If the Examiner maintains this rejection, Applicants respectfully request further explanation as to Jameson’s relevance.



*Rejection of claims 2 and 3 over Connor in view of Jameson and Dembo*

Claims 2 and 3 were rejected over Connor in view of Jameson and Dembo. As stated above, Jameson does not suggest not revealing the fund's assets. And as discussed in the section above relating to the rejection under § 102, Dembo does not teach calculating an estimated value for the fund based on the value of the proxy portfolio or publishing the estimated value throughout a trading period.

*Rejection of claims 4-9 over Dembo and known prior art economic risk factor models or in view of Connor, Jameson and known prior art economic risk factor models*

Claims 4-9 were rejected for the same reasons as claims 1-3 in combination with known prior art economic risk factor models, statistical risk factor models, and principal components analysis (PCA). The same arguments that Dembo and Jameson do not teach or suggest critical aspects of the claimed invention apply to this rejection. Furthermore, while economic risk factor models, statistical risk factor models, and PCA in particular were known in the art before Applicants' invention, the art did not teach or suggest using economic or statistical risk factor models or PCA in the context of creating proxy or hedging portfolios that did not reveal the holdings of the traded funds they are used to model, as required by the claims.

*Rejection of claim 10 over Connor, Jameson, and Rosenberg*

Claim 10 was rejected for the same reasons as claims 1-3, in combination with alleged teachings in Rosenberg. The same arguments that Jameson does not teach critical aspects of the claimed invention apply to these rejections.

*Rejection of claims 11-13 over Dembo or Connor and Jameson in view of known risk factor calculation methods*

Claims 11-13 were rejected for the same reasons as claims 1-3, in combination with known methods for calculating risk factors and PCA, notably as taught by Cheng. The same arguments that Dembo and Jameson do not teach or suggest critical aspects of the claimed invention apply to these rejections.

*Rejection of claims 17-28 and 33-44*

Claims 17-28 and 33-44 were rejected for the same reasons as claims 1-3, in combination with known risk factor and PCA methods. The same arguments that Dembo and Jameson do not teach or suggest critical aspects of the claimed invention apply to these rejections.

*Rejection of claim 47*

Claim 47 was rejected for the same reasons as claim 1, in combination with known methods for calculating fund sensitivity coefficients. The same arguments that Dembo and Jameson do not teach or suggest critical aspects of the claimed invention apply to this rejection. Furthermore, claim 47 has been amended to recite that “the fund sensitivity coefficients are used to create a proxy or hedging portfolio for pricing or hedging an investment in a traded fund,” which is not taught or suggested by any of the cited art.

*Rejection of claims 48-55*

Claims 48-55 were rejected for the same reasons as claims 1-3, in combination with known risk factor and PCA methods. The same arguments that Dembo and Jameson do not teach or suggest critical aspects of the claimed invention apply to these rejections.

*Rejection of claim 56*

Claim 56 was rejected for the same reasons as claims 1 and 2. The same arguments that Dembo and Jameson do not teach or suggest critical aspects of the claimed invention apply to these rejections. Furthermore, while index tracking ETFs were known in the art at the time of the present invention, Applicants disagree that using a proxy portfolio to estimate a value of a traded fund “does not differ from the methods taught in the cited art.” Before the Applicants’ invention, it was not known in the art to use a proxy portfolio to estimate a value of a traded fund – such a use of a proxy portfolio was not needed for ETFs because, as the Examiner notes, ETFs tracked indices and thus their value was publicly available. Claim 56, however, explicitly recites that the assets of the ETF “are not publicly disclosed on a daily basis,” and thus its value cannot be publicly determined.

*Rejection of claims 57-61*

The same arguments for claim 56 above apply with equal force to claims 57-61.

*Rejection of claims 74-83 and 87-99*

Claims 74-83 and 87-99 were rejected for the same reasons as claims 1-3, in combination with known risk factor and PCA methods. The same arguments that Dembo and Jameson do not teach or suggest critical aspects of the claimed invention apply to these rejections.

**Conclusion**

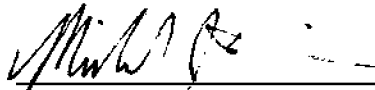
The foregoing arguments and amendments put the application in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Michael Stimson at (949) 759-3961.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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